

**REMARKS**

Claims 1, 5-14, and 20-22 are pending in the application; claims 2-4 and 15-19 are canceled.

**Priority**

A copy of the cover sheet of the priority document submitted February 9, 2004, is attached. The priority documents including cover sheet issued by the German Patent Office are riveted and tied by a ribbon, the cover sheet cannot become detached unless the ribbon and rivets are removed. Obviously, the USPTO personnel at the time of scanning the document lost the cover sheet - USPTO personnel should exercise better care in handling documents submitted by applicant.

**Rejection under 35 U.S.C. 102**

Claims 1 and 15-22 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Starr (US 6,203,117)*.

Claim 1 has been amended to include the features of claims 2, 3, 4, and 20 so that the above rejection no longer applies.

Claims 1-5, 7-9, 11-13, 15, 20-22 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Drumm (US 6,478,051)*.

The present invention as claimed in amended claim 1 relates to a compensation device for compensating a volumetric expansion of a medium during freezing. The device comprises a receptacle provided in a structural component and configured to contain a medium. A sealing element delimits the receptacle, wherein the sealing element comprises a bellows that is loaded on a first side by an operating pressure of the medium contained in the receptacle and is prestressed on a second side by a prestressing force acting against the operating pressure of the medium. A sleeve is arranged inside the sealing element. A piston is slidably mounted in the sleeve such that an end face of the piston rests against the second side of the bellows. At least one pressure spring is arranged inside the piston and acts through the piston on the bellows to provide the prestressing force.

It is important that the piston 6 is slidable in the sleeve 3 and that the piston is subjected to the force of the pressure spring 11 arranged within the sleeve 3. The piston

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is arranged in a receptacle 2 that is delimited by the sealing element 16 comprising a bellows 20 so that the sealing element is elastically deformable. The operating pressure of the medium acts on the sealing element 16 and is counteracted by the spring 11 through the piston 6.

*Drumm et al.* shows a compensation device with housing 1 in which a media-separating element 2 is arranged to divide the housing 1 into two chambers 3, 4. The media-separating element 2 has a metallic pleated bellows connected to the cover 15. The compression spring 17 (see Fig. 1) is arranged inside the element 2.

Note that the basic configuration of the compensation device of Fig. 3 is identical to that of Fig. 1. The two compensation devices differ only in that the device of Fig. 3 has a sensor 30 that is arranged within the media-separating element 2 and is surrounded by the spring 17.

The sensor 30 has nothing to do with the operation of the compensation device; it is provided for sensing the movement of the media-separating element 2 as it performs its compensating function. The basic function of the compensation device is realized by the configuration of Fig. 1, and the additional sensor 30 is an **independent device** that provides a means for measuring the operation of the compensation device (see col. 3, lines 37ff).

The sensor 30 is comprised of a two-part housing 31 with telescoping housing parts 34, 35. The housing part 35 is supported on the plate 16 that closes off the bellows and is preloaded against the plate 16 by spring 36. The housing part 34 is arranged inside the housing part 35 and is attached to the lid. A coil 32 and metallic pin 33 are arranged inside the housing parts 34, 35. The inductance of the coil 32 changes in response to the depth of immersion of the pin 33 that is moved by the plate 16 in accordance with the fill condition of the pressure fluid in the chamber 4 (col. 3, lines 58ff).

According to instant claim 1, the sealing element comprises a bellows that is loaded on a first side by an operating pressure of the medium contained in the receptacle and is prestressed on a second side by a prestressing force acting against the operating pressure of the medium; the prestressing force is provided by at least one pressure spring arranged inside the piston and acting through the piston on the bellows. In the device of *Drumm et*

*al.*, the spring that provides the prestressing force against the operating pressure is the spring 17 (shown in Fig. 1 and also shown without reference numeral in Fig. 3) surrounding the piston/sleeve arrangement of the sensor 30. The spring 17 is not arranged inside the piston and acts directly on the plate 16 of the bellows.

Claim 1 as amended also defines that the sleeve is arranged inside the sealing element and the **piston is slidably mounted in the sleeve** such that an end face of the piston rests against the second side of the bellows. The examiner defines the housing part 35 of the sensor 30 as the piston and the housing part 34 as the sleeve. As clearly shown in Fig. 3, the "sleeve" 34 is arranged **inside the "piston" 35** and not the other way around.

When the housing part 34 is considered to be the piston, as it is arranged inside the housing part (sleeve) 35, then the piston 34 does not contact with its end face the bellows.

The spring 36 inside the sensor 30 simply forces the housing part 35 against the plate 16 in order to make the sensor 30 functional and does not provide the prestressing force acting against the operating pressure of the medium.

Claim 1 as amended is therefore not anticipated or obvious in view of *Drumm et al.*

Claims 1 and 15-22 stand rejected under 35 U.S.C. 102(e) as being anticipated by *Patterson (US 6,390,133)*.

Claim 1 has been amended to include the features of claims 2, 3, 4, and 20 so that the above rejection no longer applies.

#### **Rejection under 35 U.S.C. 103**

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Drumm et al. (US 6,478,051)*.

Claim 1 as amended is believed to be allowable for the reasons presented above so that claim 6 should be allowable as a dependent claim.

#### **ALLOWABLE SUBJECT MATTER**

Claims 10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 10 has been amended to include the features of claims 1, 2, 3, 4, and 8 and should thus be allowable.

Claim 14 has been amended by incorporating therein the features of claims 1, 2, 3, 4, 12, and 13 and should thus be allowable.


### **CONCLUSION**

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or e-mail from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on January 27, 2005,

  
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Encl.:

- time extension petition (1 sheet)
- copy of cover sheet of priority document (1 sheet)